Clipping, July 18, 1908

BELL et al. : v. : INTERFERENCE N o 34,455. MYERS.:

“EXHIBIT N o 6 of Bell et al., Scientific American of July 18, 1908.”

R. C. Fitzhugh Notary Public.

45

July 18, 1908. **Scientific American**

THE WINNING FLIGHT OF THE “JUNE BUG” AEROPLANE FOR THE SCIENTIFIC AMERICAN TROPHY.

Nearly a score of Aero Club members and others interested in aviation made the trip to Hammondsport, N. Y., to witness the flight of the Aerial Experiment Association's third aeroplane, the “June Bug,” on the Fourth of July, for the Scientific American trophy. The distance to be covered was a kilometer in a straight line, this being the required distance for the first contest. As Mr. Curtiss was the first aviator to come forward with a practical aeroplane and request a trial since the date of the first competition. September 14, 1907, according to the rules, if he performed the flight set, he would be the first winner. In order to permanently win the cup, he would be obliged to win it three times in separate years. The day at Hammondsport was a typical Fourth of July, there being a number of thunder showers throughout the day, with clearing weather late in the afternoon. Consequently, it was not until 5 P. M. that the aeroplane was taken out of its tent and prepared for the trial. The tail was attached, the motor tested, and, after the photographers had taken numerous pictures, everything was in readiness for the flight. Mr. Charles M. Manley, the late Prof. Langley's assistant and an aviator of note, was the sole representative of the Aero Club's contest committee. In the middle of the afternoon, Mr. Manley measured off the kilometer (3,300 feet), the distance laid out being actually 3,300 feet. The course started on one side

of an old half-mile race track, and passed directly through a vineyard and several fields. It was also necessary for the machine to cross several barbed wire fences before it could fly over the finishing post, which was surmounted with a red flag. Mr. Alan R. Hawley, the acting president of the Aero Club of America, was located at the finish, and Mr. Manley took the time at the start at the instant when the machine left the ground. Mr. A. M. Herring and the Aeronautical Editor of the Scientific American were located within a thousand feet of the finish.

Copyright 1908 by Levick. Rear View of the Aeroplane as It Flew Over the Fields. Note the horizontal wing tips and the downwardly-inclined horizontal rudder in front. The tail and vertical rudder are also outlined against the sky.

By 6 P. M. everything was ready, and the air was quite calm. The machine was placed at one end of the course, the aviator took his seat, and the motor was started. The instant it was released, the aeroplane shot forward with constantly accelerating velocity. It required only 12 seconds and a distance of about 100 feet before it rose in the air. As he approached the end of the track, Mr. G. H. Curtiss, the aviator, steered his machine to the left, in order to pass around the vineyard. One of our photographs shows the aeroplane making the turn at this point. The machine kept rising, and Mr. Curtiss found difficulty in stopping this, although he directed the horizontal rudder downward to the full extent. Finally, he retarded the ignition of the motor, which caused the machine to slow down and drop. He was unable to rise again, and the machine settled down gently in the high grass about 1,000 feet before it reached the finish.

Upon looking the machine over thoroughly after it had been pushed back to the starting point, it was found that the tail had been attached at too sharp a downward angle. This tended to direct the machine upward, and the horizontal rudder was not sufficient to counteract this. After correcting the inclination of the tall, and after going over the machine thoroughly to make sure everything was in good order, the second attempt was made at 7 P. M. In this flight the machine rose quickly, as before, and following the same course,

it sped rapidly on at a height of some 20 feet. As it neared the finish post, it dropped to about 15 feet, and then continued onward, making a wide sweep to the left, and alighting without damage in a rather rough field. The distance traversed was easily a mile, and the time of the flight 1 minute 42# seconds. This corresponds to an average speed of 35.1 miles an hour;but if the distance of 6,000 feet is taken as the total length of the flight (which distance has been computed by the members of the Association who are most familiar with the course) the speed of the machine was very nearly 40 miles an hour—39.8 to be exact. Thus it will be seen that this aeroplane, with the total weight of 650 pounds including the aviator, and with the expenditure of 25 horse-power, is capable of very nearly the same speed that the Wright brothers claim for their 1,000-pound machine with approximately the same horse-power. The reason that this new aeroplane is able to make such fast speed with so little horse-power as compared with the Farman and Delagrange aeroplanes, is that the tall has been reduced to a much smaller size than those used by the foreign aviators, and that, therefore, there is much less resistance or drag offered by it. The Wright aeroplane has no tail whatever, which is one of the main reasons for its high efficiency.

 The Aeroplane Tipping as It made a Sharp Turn After Leaving the Race Track. Note the downward inclination of the left-hand wing tips for the purpose of righting the machine. **THE WINNING FLIGHT OF THE CURTISS AEROPLANE FOR THE SCIENTIFIC AMERICAN TROPHY.**

The dimensions of the bowed surfaces of the tall are 10 feet long y 27 inches wide. The vertical rudder at the rear edge of the tail is 30 inches square, while the horizontal rudder is 30 inches wide by 8 feet long, with a section of 32 inches removed in the center. The surface of the tail is therefore 22½ square feet; that of the vertical rudder, 6½ square feet; and that of the horizontal rudder, 13# square feet. The planes themselves have a surface of 370 square feet, and there are 35 square feet of vertical surface in the struts and running gear. The propeller is 6 feet 2 inches in diameter, with a 17-degree pitch. As a 17½-degree pitch is equal to the diameter, the pitch, as can be seen, is slightly less

than the diameter. The propeller is mounted direct on the engine crankshaft, which makes 1,200 R. P. M. and develops 25 horse-power. At 38 miles an hour, the aeroplane lifts 26 pounds per horse-power, while the amount lifted per square foot of supporting surface of the main planes is 1¾ pounds. For further particulars regarding this machine, we refer our readers to our issue of July 4.

An interesting point brought out by Mr. Curtiss is that whenever he attempts to drive his machine around the vineyard mentioned, it invariably rises suddenly if struck by some invisible force. Skilled into enlieve this is due to slight ascending air and jammed up by the contour of the land at this point D. vineyard may have something to do with it securely in

The next day, late in the afternoon the rope under made another flight, at the end of G, practically a complete circle. The flight was 4,000 feet in length, and lasted for 1¼ minutes. The front wheel and several struts of the aeroplane were broken in the descent. This was the sixteenth flight of the “June Bug,” and next to the trophy flight of July Fourth, it was the longest that had been made. Mr. Curtiss hopes to make exhibition flights with this aeroplane during the summer, and it is probable that after further practice above a suitable ground, he will be able to duplicate the performances of Delagrange and Farman. We congratulate him at his success in winning our trophy for the first time, and we hope that progress in aviation will be so rapid, that he will stand an excellent chance of winning it again in the future and much more difficult contests to be held.

A Canadian government survey party has been sent to lay out the town site of Fort Churchill, the future metropolis of Hudson Bay. The only settler who is now on the proposed site, which is on the east side of Churchill River, opposite the Hudson Bay post, will be entitled to a free grant of 160 acres. The bill providing for the construction of the Hudson Bay Railway will be introduced into the Dominion Parliament soon, but unless the present deadlock is broken, dissolution must come soon. No progress is being made with legislation at present.